This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for providing a color space representation of color images in a color management system, comprising the steps of:

mapping RGB color data values representing an image in a first device into gamut expanded sRGB color values of a gamut expanded sRGB color space; and

converting the gamut expanded sRGB color data values of the gamut expanded sRGB~~A~~ color space into RGB color data values representing an image in a second device, the RGB color data values of the first device being different from the RGB color data values of the second device and the physical appearance of the image in the first device being the same as the physical appearance of the image in the second device,

wherein the gamut expanded sRGB color data values are linear with respect to luminance.

Claims 2-3 (canceled)

Claim 4 (previously amended): The method of claim 1 wherein if the color data values in the gamut expanded sRGB color space lie outside a range of the RGB data values of the second device, further including clipping the color data values for the second device.

Claim 5 (canceled)

Claim 6 (previously amended): The method of claim 1 wherein the gamut expanded sRGB color space is linear in visual intensity.

Claim 7 (previously amended): The method of claim 1 wherein the gamut expanded sRGB color space comprises an XsRGB color space that includes at least the visible range of color values,

and where selected, ~~one of~~ the gamut expanded sRGB color space ~~and the gamut expanded RGBA color space~~ includes an alpha channel for at least one of: ~~-~~transparency information and opaqueness information.

Claim 8 (previously amended): The method of claim 1 wherein the gamut expanded sRGB color space includes a color space defined by a gamut that extends into negative component values and beyond 1.0 when normalized to 1.0 in RGB.

Claim 9 (previously amended): The method of claim 1 wherein mapping the RGB color values to the gamut expanded sRGB color space includes utilizing multiplication of R_0, G_0, B_0 values by a predetermined matrix, where the R_0, G_0, and B_0 values denote normalized numerically linear red, green and blue components for a color value.

Claim 10 (original): The method of claim 9 wherein the R_0, G_0, B_0 values are obtained in accordance with the following:

$$\begin{bmatrix} R_0 \\ G_0 \\ B_0 \end{bmatrix} = \begin{bmatrix} 3.241 & -1.5374 & -0.4986 \\ -0.9692 & 1.8760 & 0.0416 \\ 0.0556 & -0.2040 & 1.0570 \end{bmatrix} \begin{bmatrix} X \\ Y \\ Z \end{bmatrix}$$

wherein X, Y, and Z denote 1931 Commission Internationale de l'Eclairage XYZ values where Y has been normalized to 1.

Claim 11 (previously amended): The method of claim 1 wherein each color data value of the source color space uses a signed 16 bit integer and 13 bits are used as a decimal portion.

Claim 12 (original): The method of claim 11 wherein 16 bit components R_{16}, G_{16} and B_{16} are given by:

$$\begin{bmatrix} R_{16} \\ G_{16} \\ B_{16} \end{bmatrix} = 8192 \times \begin{bmatrix} R_0 \\ G_0 \\ B_0 \end{bmatrix}$$

where the $R_0, G_0,$ and B_0 values denote normalized numerically linear red, green and blue components for a color value.

Claim 13 (previously amended): The method of claim 4, wherein mapping includes, where color data values of the first device have been represented using signed 16 bit values and 13 bits of decimal precision, clipping the 16 bit values below 0 and above 8192 to convert the 16 bit values to 8 bit values.

Claim 14 (currently amended): The method according to claim 1, wherein the color data values of the first device are one of: non-premultiplied color data values~~;~~, premultiplied color data values~~;~~, and normalized numerically linear premultiplied color values.

Claim 15 (currently amended): In a digitized image processing system in which an image digitizer outputs digital signals representing an image, a method for providing representation of color images from measured RGB color values in a color management system, comprising the steps of:

mapping the measured RGB color values to a gamut expanded sRGB color space, wherein the sRGB expanded color space includes color values beyond a reproduction range of a specific device and includes all colors in a humanly visible gamut; and

converting the gamut expanded sRGB color data values of the gamut expanded sRGB color space into RGB color data values representing an image in a destination device, the measured RGB color data values being different from the RGB color data values of the destination device and the physical appearance of the image output by the digitizer device being the same as the physical appearance of the image in the destination device,

wherein the gamut expanded sRGB color data values are linear with respect to luminance.

Claim 16 (previously amended): The method of claim 15 wherein the gamut expanded sRGB color space includes an XsRGB color space defined by a gamut that extends into negative

component values and beyond 1.0 when normalized to 1.0 in RGB, and where selected, wherein the expanded sRGB color space includes an alpha channel for at least one of: transparency information and opaqueness information.

Claim 17 (previously amended): The method of claim 15, wherein said mapping the measured color values to an expanded sRGB color space includes utilizing multiplication of R_0, G_0, B_0 values by a predetermined matrix, where the R_0, G_0, B_0 values denote numerically linear red, green and blue components for a color value.

Claim 18 (previously amended): The method of claim 17, wherein the R_0, G_0, B_0 values are obtained in accordance with the following:

$$\begin{bmatrix} R_0 \\ G_0 \\ B_0 \end{bmatrix} = \begin{bmatrix} 3.241 & -1.5374 & -0.4986 \\ -0.9692 & 1.8760 & 0.0416 \\ 0.0556 & -0.2040 & 1.0570 \end{bmatrix} \begin{bmatrix} X \\ Y \\ Z \end{bmatrix}$$

wherein X, Y, and Z denote 1931 Commission Internationale de l'Eclairage XYZ values wherein Y has been normalized to 1.

Claim 19 (currently amended): The method of claim 15 ~~wherein~~, wherein each measured color data value uses a 16 bit integer and 13 bits are used as a decimal portion.

Claim 20 (previously amended): The method of claim 15, wherein 16 bit components R_{16}, G_{16}, and B_{16} of measured color data values are given by:

$$\begin{bmatrix} R_{16} \\ G_{16} \\ B_{16} \end{bmatrix} = 8192 \times \begin{bmatrix} R_0 \\ G_0 \\ B_0 \end{bmatrix}$$

where the R_0, G_0, B_0 values denote normalized numerically linear red, green and blue components for a color value.

Claim 21 (previously amended): The method of claim 15, wherein if measured color data values have been represented using signed 16 bit values with 13 bits of decimal precision, further including clipping the 16 bit values below 0 and above 8192 to convert the 16 bit values to 8 bit values.

Claim 22 (currently amended): The method of claim 15, wherein the measured color data values are one of: non-premultiplied color data values~~;~~, premultiplied color data values~~;~~, and normalized numerically linear premultiplied color data values.

Claim 23 (currently amended): A computer-readable medium having computer-executable instructions for performing the steps of:

mapping measured color values to a gamut expanded sRGB color space, wherein the gamut expanded sRGB color space includes color values beyond a reproduction range of a specific device and includes all colors in a humanly visible gamut; and

converting the gamut expanded sRGB color data values of the gamut expanded sRGB color space into RGB color data values representing an image in the destination device, the measured RGB color data values being different from the RGB color data values of the destination device and the physical appearance of the image output by the digitizer device being the same as the physical appearance of the image in the destination device,

wherein the gamut expanded sRGB color data values are linear with respect to luminance.

Claims 24-56 (canceled)

Claim 57 (currently amended): In a digitized image processing system in which an image digitizer utilizes color image information to output RGB digital color signals representing a color image to an apparatus that uses the digital color signals to provide representation of a color image in a color management system, the apparatus comprising:

an expanded sRGB color space mapper, for mapping the digital color data signals representing RGB color data values of the image digitizer to gamut expanded sRGB color space values; and

a processor for converting said gamut expanded sRGB color space values to RGB color space values representing an image in a destination peripheral device, the RGB color data values of the image digitizer being different from the RGB color data values of the destination peripheral device and the physical appearance of the image in the image digitizer being the same as the physical appearance of the image in the destination peripheral device,

wherein the gamut expanded sRGB color space values are linear with respect to luminance.

Claim 58-59 (canceled)

Claim 60 (currently amended): A method for representing color images in a color management system in a gamut expanded sRGB color space and further representing at least one of super transparent and super opaque colors using an alpha channel, comprising the steps of:

representing RGB color data values of a source peripheral device as one of perceptually visible super transparent data values and perceptually visible super opaque data values in said gamut expanded sRGB color space; and

converting one of said perceptually visible super transparent data values and perceptually visible super opaque data values to RGB color data values of a destination peripheral device, the RGB color data values of the source peripheral device being different from the RGB color data values of the destination peripheral device and the physical appearance of an image represented by the RGB color data values in the source peripheral device being the same as the physical appearance of an image represented by the RGB color date values in the destination peripheral device,

wherein said perceptually visible super transparent data values and perceptually visible super opaque data values are linear with respect to luminance.

Claim 61 (new): A method for converting color data values comprising the steps of:

mapping color data values representing an image in a first device into color data values of a XsRGB color space; and

converting the XsRGB color data values into color data values representing an image in a second device,

wherein the XsRGB color data values are linear with respect to luminance.

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Claim 62 (new): A computer-readable medium comprising computer readable instructions that, when executed, cause a computer to perform a method for converting color data values, comprising:

mapping color data values representing an image in a first device into color data values of a XsRGB color space; and

converting the XsRGB color data values into color data values representing an image in a second device,

wherein the XsRGB color data values are linear with respect to luminance.